IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	10/053,179	**Art Unit:**	2477
Inventor:	Kenneth L. Stanwood	**Examiner:**	Sefcheck, Gregory B
Filed:	January 15, 2002	**Confirmation No.:**	2846
Title:	PACKING SOURCE DATA PACKETS INTO TRANSPORTING PACKETS WITH FRAGMENTATION	**Docket No.:**	112174-010UTL

Response to Notification of Non-Compliant Appeal Brief

Mail Stop Appeal Brief - Patents
US Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This communication is in response to a Notification of Non-Compliant Appeal Brief (the "Notification") issued on 2/3/11. The Notification states that that the claims appendix did not match the set of claims filed and entered on July 20, 2010. In particular, the Notification states that claim 98 is missing from the claims appendix. The Notification also states that the entire appeal brief is not required, only the defective area. Accordingly, Appellant submits herewith a replacement claims appendix including claim 98.

CONCLUSION

In view of the foregoing, Appellant respectfully submits that the claimed invention is patentable over the references of record. The Examiner has failed to identify or provide teachings in the references for each of the claim limitations. Appellant respectfully requests reversal of the Examiner's rejections.

Respectfully submitted,

Dated: 2-11-11

By: _____
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VIII. CLAIMS APPENDIX

1 – 50 (CANCELLED)

51. A node for use in a communications system that packs and fragments variable-length service data units (SDU) for mapping into variable length protocol data units (PDU), each PDU having a payload area, and a header area, each SDU being associated with a specified connection, the node comprising:

a communications processor configured to pack and fragment service data units associated with the specified connection into a protocol data unit, including performing the following operations:

establishing a length for the protocol data unit based on bandwidth allocated to the specified connection in a current frame,

mapping a first service data unit to the payload area of the protocol data unit,

determining whether a second service data unit is larger than the remaining payload area of the protocol data unit,

if the second service data unit is not larger than the remaining payload area of the protocol data unit, then mapping the second service data unit to the remaining payload area of the protocol data unit, and

if the second service data unit is larger than the remaining payload area of the protocol data unit, then fragmenting the second service data unit into at least two fragments and mapping the first fragment to the payload area of the protocol data unit, wherein:

the header area of the protocol data unit includes a length field specifying the length of the protocol data unit, and

the payload area of the protocol data unit includes a packing subheader for each service data unit and each service data unit fragment packed in the payload area, the packing subheader specifying the length of a respective service data unit or a respective fragment.

52. The node of claim 51, further comprising:

a transmitter coupled to the communications processor configured to map the protocol data unit into frames and transmit the frames from the node.

53. The node of claim 51, wherein service data units of different protocols and packet formats are mapped to protocol data units of a common format.

54. The node of claim 51, wherein the packing subheader further comprises a fragmentation control field specifying whether the protocol data unit includes a service data unit fragment.

55. The node of claim 54, wherein the fragmentation control field comprises at least two bits.

56. The node of claim 51, wherein the packing subheader further comprises a fragment sequence number.

57. The node of claim 51, wherein the header area of the protocol data unit comprises a packing subheader present field.

58. The node of claim 57, wherein the packing subheader present field comprises at least one bit.

59. The node of claim 51, wherein the header area of the protocol data unit comprises an encryption control field.

60. The node of claim 59, wherein the encryption control field comprises at least one bit.

61. The node of claim 51, wherein the header area of the protocol data unit further comprises an encryption key field.

62. The node of claim 61, wherein the encryption key field comprises at least two bits.

63. A base station for use in a communications system, that packs and fragments variable-length service data units (SDU) for mapping into variable length protocol data units (PDU), each PDU having a payload area, a header area, and being associated with a specified connection, the base station comprising:

a communications processor configured to pack and fragment service data units associated with the specified connection into a protocol data unit including performing the following operations:

establishing a length for the protocol data unit based on bandwidth allocated to the specified connection in a current frame, wherein the bandwidth allocated to the specified connection is established based on one or more communication parameters,

mapping a first service data unit to the payload area of the protocol data unit,

determining whether a second service data unit is larger than the remaining payload area of the protocol data unit,

if the second service data unit is not larger than the remaining payload area of the protocol data unit, then mapping the second service data unit to the remaining payload area of the protocol data unit, and

if the second service data unit is larger than the remaining payload area of the protocol data unit, then fragmenting the second service data unit into at least two fragments and mapping the first fragment to the payload area of the protocol data unit, wherein:

the header area of the protocol data unit includes a length field specifying the length of the PDU, and

the payload area of the protocol data unit includes a packing subheader for each service data unit packed in the payload area, the packing subheader specifying the length of a respective service data unit.

64. he base station of claim 63, further comprising:

a transmitter coupled to the communications processor configured to map the protocol data units for the specified connection into frames together with protocol data units from other

connections that share a communication link with the specified connection and transmit the frames from the base station.

65. The base station of claim 63, wherein service data units of different protocols and packet formats are mapped to protocol data units of a common format.

66. The base station of claim 63, wherein the packing subheader further comprises a fragmentation control field specifying whether the protocol data unit includes a service data unit fragment.

67. The base station of claim 66, wherein the fragmentation control field comprises at least two bits.

68. The base station of claim 63, wherein the packing subheader further comprises a fragment sequence number.

69. The base station of claim 63, wherein the header area of the protocol data unit comprises a packing subheader present field.

70. The base station of claim 69, wherein the packing subheader present field comprises at least one bit.

71. The base station of claim 63, wherein the header area of the protocol data unit further comprises an encryption control field.

72. The base station of claim 71, wherein the encryption control field comprises at least two bits.

73. The base station of claim 63, wherein the header area of the protocol data unit further comprises an encryption key field.

74. The base station of claim 73, wherein the encryption key field comprises at least two bits.

75. The base station of claim 63, wherein the header area of the protocol data unit comprises a connection identifier field.

76-81. (Canceled).

82. A node as claimed in claim 51, wherein the first SDU is a last fragment of a SDU.

83. A method of formatting protocol data units (PDUs) from incoming variable-sized service data units (SDUs) for transmission of data carried by the PDUs over a communication channel shared by one or more user connections, comprising, for a specified connection:

provisioning a protocol data unit (PDU), including a header and a payload area, wherein the length of the PDU is established in conjunction with the bandwidth amount allocated to the specified connection in a current frame, the bandwidth amount being established frame-by-frame based on one or more communication parameters associated with the specified connection and general system parameters; and

packing and fragmenting the SDUs associated with the specified connection into the payload area of the PDU based on the current length of the payload area.

84. The method of claim 83, wherein the length of the PDU changes as the bandwidth allocated to the specified connection changes.

85. The method of claim 83, wherein the step of packing and fragmenting comprises:

mapping one or more SDUs into the payload area of the PDU until a remaining area in the payload area of the PDU cannot accommodate a next SDU;

fragmenting the next SDU into a first and a second fragment, the first fragment having the length of the remaining area;

mapping the first fragment to the remaining area; and

inserting fragmentation header information to indicate the fragmentation state of the payload and to identify the first fragment as being a first fragment.

86. The method of claim 85, wherein any SDU fragment includes a fragmentation control field identifying the SDU fragment.

87. The method of claim 85, wherein the step of packing and fragmenting further comprises:

mapping the second fragment to a next PDU if the length of the second fragment fits into the length of the payload area of the next PDU; and

inserting fragmentation control information to indicate the fragmentation state of the payload and to identify the last fragment as being a last fragment.

88. The method of claim 85, wherein the step of packing and fragmenting comprises:

further fragmenting the second fragment if the length of the second fragment is larger than the length of the payload area of a next PDU to obtain a third fragment having the length of the payload area of the next PDU;

mapping the third fragment to the next PDU; and

inserting fragmentation control information, to indicate the fragmentation state of the payload and to identify the third fragment.

89. A method for use in a communications system that maps variable length service data units (SDU) associated with a specified connection according to a plurality of service level for the data carried by the SDUs, into a protocol data unit (PDU) having a variable-length payload area and a header area, the method comprising:

establishing a length for the protocol data unit based on bandwidth currently allocated to the connection in a current frame, wherein the bandwidth allocated to the connection is established based on one or more communication parameters;

receiving a first service data unit and a second service data unit;

fragmenting the second service data unit into at least two fragments;

packing the first service data unit and a corresponding packing subheader into the payload area of the protocol data unit; and

packing a first fragment of the second service data unit and a corresponding packing subheader into a remaining portion of the payload area of the protocol data unit,

wherein each packing subheader comprises a length field specifying the length of the corresponding service data unit and a fragmentation control field indicating whether the

corresponding service data unit is a first fragment, a continuing fragment, a last fragment, or an unfragmented service data unit.

90. The method of claim 89, wherein the length of the packing subheaders is variable.

91. The node of claim 51, further comprising a classification module for classifying the SDUs based on at least a connection identifier, for enabling packing and fragmenting of the SDUs on the connection in a PDU allocated to that connection.

92. The node of claim 91, wherein the classification module uses control protocols specific to each particular type of SDU being classified.

93. The node of claim 92, further comprising a convergence sublayer module that processes the SDUs classified by the classification module for service specific connection establishment, maintenance, and data transfer operations.

94. The node of claim 93, further comprising a data queuing module wherein the SDUs are sorted based on the connection identifier and individual characteristics.

95. The node of claim 91, further comprising a communication control module which prepares a bandwidth allocation map with the bandwidth allocated to each node sharing the communication channel.

96. The node of claim 95, wherein the communications processor establishes the bandwidth allocated to each connection from the bandwidth currently allocated to a respective node based on the priority and type of the connections served by the node.

97. The node of claim 51, wherein if the first service data unit is larger than the payload area of the protocol data unit, fragmenting the first service unit to obtain a fragment of the size of the payload area of the protocol data unit and mapping the fragment to the protocol data unit.

98. The node of claim 63, wherein the one or more communication parameters include an amount of bandwidth requested for the connection and an amount of bandwidth to be shared in the frame with other connections established at the node.